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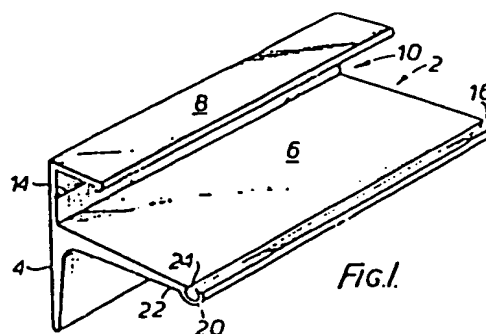
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(54) An elongate shelf support.

(57) An elongate shelf support (2) comprising a back mounting plate (4) and first and second flanges (6,8), the shelf support being formed as an extrusion so that the back mounting plate and the first and the second flanges are integrally formed together, the back mounting plate being for mounting the shelf on a vertical surface, and the first and the second flanges being such that they are spaced apart and extend outwardly from the back mounting plate substantially at right angles to the back mounting plate to define a shelf-receiving slot (10) for receiving a shelf which is a friction fit in the shelf-receiving slot, the first flange extending outwardly farther than the second flange so that the first flange acts to support the shelf whilst the second flange acts to trap the shelf and prevent it pivoting in a clockwise manner about the first flange, the first flange being thicker than the second flange and the back mounting plate being thicker below the first flange than above the first flange whereby the first flange projects in an unsupported manner from the back support plate but is still sufficiently robust in use to support the weight of a shelf and objects placed upon the shelf.



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AN ELONGATE SHELF SUPPORT

This invention relates to an elongate shelf support.

There are many known types of shelf support. Usually, the shelf supports are in the form of individual brackets which are thin and which are placed at spaced apart intervals and which then support a shelf placed on top of the brackets. The shelf may be freely supported on the individual brackets or it may be positively secured to the individual brackets, for example by screws.

As an alternative design to the individual shelf brackets, there are also known elongate shelf supports comprising a back mounting plate and first and second flanges. These elongate shelf supports are formed as an extrusion so that the back mounting plate and the first and second flanges are integrally formed together. Such types of elongate shelf supports may sometimes be preferred to individual brackets, for example for individual aesthetic reasons, or where a support extending the entire length of a shelf is required, or where a particular shelf mounting arrangement afforded by a particular type of elongate shelf support is required.

It is an aim of the present invention to provide an elongate shelf support which has novel design characteristics and which is easy to extrude, whilst at the same time affording a robust shelf support that will not deform under loads but which also is economical in its use of material.

Accordingly, this invention provides an elongate shelf support comprising a back mounting plate and first and second flanges, the shelf support being formed as an extrusion so that the back mounting plate and the first and the second flanges are integrally formed together, the back mounting plate being for mounting the shelf support on a vertical surface, and the first and the second flanges being such that they are spaced apart and extend outwardly from the back mounting plate substantially at right angles to the back mounting plate to define a shelf-receiving slot for receiving a shelf which is a friction fit in the shelf-receiving slot, the first flange extending outwardly farther than the second flange so that the first flange acts to support the shelf whilst the second flange acts to trap the shelf and prevent it pivoting in a clockwise manner about the first flange, the first flange being thicker than the second flange and the back mounting plate being thicker below the first flange than above the first flange whereby the first flange projects in an unsupported manner from the back support plate but is still sufficiently robust in use to support the weight of a shelf and objects placed upon the shelf.

Usually, the elongate shelf support will be mounted on the vertical surface of a wall. However, if desired, the wall may itself support an arrangement such for example as a slatted arrangement, in which case the elongate shelf support will be mounted on the wall through the intermediary of the arrangement such as the slatted arrangement.

The elongate shelf support enables shelves to be mounted on a single horizontal wall mounted support or rail. This arrangement is aesthetically pleasing. Furthermore, the elongate shelf support is easy to extrude and is economical in its use of materials.

The elongate shelf support can be extruded in different sizes to provide different widths of shelf-receiving slot, for example for receiving shelves that are 15mm, 16mm, 20mm or 25mm thick. Especially where wood shelves are concerned, the thickness of the shelves may vary, for example in cases where a wooden shelf has subsequently been provided with a veneer on its upper and/or lower surfaces. The shelf-receiving slot can receive shelves of slightly varying thicknesses due to the fact that the shelf support can be extruded from a slightly resilient material such as aluminium and also due to the precise design whereby the second flange is thinner than the first flange and the back mounting plate is thinner above the first flange than below the first flange. This means that the second flange and the part of the back mounting plate above the first flange can be produced sufficiently thin to flex slightly to accomodate slightly varying widths of shelves, whilst still being produced to be sufficiently strong to stop a shelf under load from pivoting in a clockwise manner about the first flange. As indicated above, the first flange and the portion of the back mounting plate below the first flange can be produced of the required thickness to adequately support the shelf and objects placed upon the shelf.

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Preferably, the first flange merges with the back mounted plate over a curved portion which causes the back mounting plate to taper in thickness from below the first flange and the first flange to taper in thickness from the back mounting plate.

The second flange may merge with the back mounting plate in a straight sided joint which causes the back mounting plate to be of substantially uniform thickness above the first flange.

The back mounting plate may have a locating groove positioned between the first and the second flanges, the locating groove being for locating a drill bit for drilling a mounting hole in a predetermined location in the back mounting plate. The back mounting plate will then normally be screwed to a wall.

The locating groove may be centrally positioned between the first and the second flanges. Usually, the locating groove will be V-shaped in cross section.

The first flange is advantageously provided with a retaining groove positioned along its face that is nearest the second flange, the retaining groove being provided with a strip of resilient material, and the resilient material acting as a deformable retaining member whereby the resilient material can deform for causing the shelf to be a tight friction fit in the shelf-receiving slot and whereby the resilient material can grip the shelf when the shelf is inserted in the shelf-receiving slot. The use of the strip of resilient material is particularly advantageous for glass

shelves whereby the glass shelf can be arranged to be a relatively tight friction fit in the shelf-receiving slot without the risk being encountered of chipping the glass by forcing it into the shelf-receiving slot. In instances where the shelf is made of a material other than glass, the resilient material can be removed if the shelf is otherwise too thick to enter the shelf-receiving slot.

The retaining groove may be provided in a downwardly depending bead portion extending along the edge of the first flange whereby the retaining groove is deeper than the thickness of the adjacent portion of the first flange.

The retaining groove may have a mouth which opens into a cavity, the cavity being larger than the mouth.

The resilient material may be rubber or a plastics material. The plastics material may be polyvinyl chloride, polythene or nylon. The resilient material may be of varying desired thicknesses.

If it is not desired to employ a retaining groove for retaining the strip of resilient material, it will be appreciated that the first flange may be provided with a stick on strip of the resilient material or with stick on pads of the resilient material.

The second flange may have a downwardly depending deformable bead to enable a slightly oversize shelf to be forced into the shelf-receiving slot.

The provision of the downwardly depending deformable bead is particularly advantageous for wooden shelves which

vary in thickness as mentioned above, for example when they are provided with upper and lower veneers. The deformation of the bead is a particularly simple way of getting wooden shelves that are too thick into the shelf-receiving slot without having to cut pieces out of the shelf, which is time consuming and often does not look aesthetically pleasing.

The back mounting plate may have a flat mounting face. Alternatively, the back mounting plate may have a stepped mounting face, a part of the back mounting plate above the first flange being stepped back towards the first flange. In both of these cases, the back mounting plate will normally be secured to a vertical surface such for example as a wall by screws or similar fixing means.

The second flange may be of increased thickness adjacent the back support plate.

The face of the first flange that is nearest to the second flange may be flat and planar.

Preferably, the first flange is more than twice the width of the second flange.

The second flange may be provided with first and second upstanding spaced apart walls which define a guide channel, the first and second walls being formed integrally with the remainder of the elongate shelf support, and the guide channel being for receiving and guiding at least one sliding member.

The first wall may be formed as an extension of the back mounting plate.

The first wall may be thinner than that portion of the back mounting plate between the first and the second flanges.

The first and the second upstanding walls may have inwardly directed lips. Each lip may be provided with a groove.

The second wall may have a curved portion which gives a pleasing aesthetic effect.

If desired, the second flange may be provided with a single upstanding wall, the wall having a downwardly depending lip at its upper end which faces a similar lip which upstands from the second flange in spaced apart relation to the single upstanding wall, the pair of lips and the wall forming a guide channel having a mouth which opens in the same direction as the shelf-receiving slot and which is positioned above the second flange, and the guide channel being for receiving at least one sliding member.

In a further alternative design, a pair of spaced apart lips may project outwardly from the back mounting plate below the first flange, the pair of lips and the back mounting plate defining a guide channel having a mouth which opens in the same direction as the shelf-receiving slot and which is positioned below the first flange.

If desired, a pair of spaced apart lips may project downwardly from the first flange, the pair of lips and the first flange defining a guide channel having a mouth which opens at right angles to the direction at which the shelf-receiving slot opens and which is positioned underneath the first flange.

Irrespective of where the guide channel is positioned, the guide channel may be rectangular in cross section. If desired, the guide channel may also be part circular in cross section.

The elongate shelf support may include the sliding member. The sliding member is preferably a book end but it could be another type of member.

Although the sliding member can slide in the guide channel, it is to be appreciated that the sliding member can be constructed so that it gains entry into the guide slot either from one end and slides along the guide slot, or it clips into and out of the guide channel from the open mouth of the guide channel. The sliding member can be produced in any desired material such for example as a metal or a plastics material. Steel is a preferred metal.

In cases where it is not desired to mount the elongate shelf support directly to a wall, for example using screws, then the back mounting plate may be provided with at least one mounting means which extends from the face of the back mounting plate that is opposite the face from which the first and the second flanges extend, the mounting means being for locating

in a cavity in a vertical support arrangement. This vertical support arrangement may be a slatted arrangement and the cavity for the mounting means may be the space between slats. Usually, there will be several mounting means positioned along the length of the face of the back mounting plate but it is to be appreciated that one relatively long mounting means could be employed if desired.

Preferably, the mounting means is a hook device. The mounting means may also be a key device.

The elongate shelf support may be such that it includes a strengthening gusset.

The strengthening gusset may be an angled strut. A plurality of short angled struts may be employed or alternatively a single long strut may be used.

The present invention also extends to the combination of the elongate shelf support with a shelf. The shelf may be made of any desired material such for example as wood, a plastics material or glass.

The elongate shelf support may be used to provide a single support rail along a vertical wall or other arrangement. In this case, the shelf support will act as a simple cantilever device for retaining a shelf in position. If desired, two of the elongate shelf supports may be mounted on two adjacent walls so that they meet at a 90° corner. If the shelf supports are positioned at the same height, a triangular or other shaped shelf can then be forced into the adjacent shelf-receiving slots.

The elongate shelf support member can also be provided with a cap to snap into or slide into the shelf-receiving slot to cover parts of the slot, for example to cover electrical wiring or similar cabling.

Embodiments of the invention will now be described solely by way of example and with reference to the accompanying drawings in which:

Figure 1 shows a first elongate shelf support;

Figure 2 is an end view of the elongate shelf support shown in Figure 1;

Figure 3 is an end view of a second elongate shelf support;

Figure 4 is an end view of a third elongate shelf support;

Figure 5 is an end view of a fourth elongate shelf support;

Figure 6 is an end view of a fifth elongate shelf support;

Figure 7 shows the shelf support of Figures 1 and 2 in use;

Figures 8 to 14 show further different designs of elongate shelf support;

Figure 15 shows part of a further design for an elongate shelf support;

Figure 16 shows the shelf support of Figure 8 in use with a sliding member in the form of a book end;

Figure 17 shows the elongate shelf support of Figure 9 in use with a sliding member in the form of a book end;

Figure 18 shows a further design for a sliding member in the form of a book end;

Figures 19 and 20 show two further alternative elongate shelf supports; and

Figure 21 shows a cover for use with the elongate shelf support shown in Figure 6.

Referring now to Figures 1 and 2, there is shown an elongate shelf support 2, comprising a back mounting plate 4 and first and second flanges 6,8 respectively. The back mounting plate 4 and the first and the second flanges 6,8 are formed as an extrusion so that the back mounting plate 4 and the first and the second flanges 6,8 are integrally formed together. As shown, the first flange 6 is more than twice the width of the second flange 8.

The back mounting plate 4 is for mounting the shelf support on a vertical surface such as a wall (not shown). The first and the second flanges 6,8 are such that they are spaced apart as shown and they extend outwardly from the back mounting plate 4 substantially at right angles to the back mounting plate 4 to define a shelf-receiving slot 10. The shelf-receiving slot 10 is for receiving a shelf (not shown in Figures 1 and 2) which is a friction fit in the shelf-receiving slot 10. Because the first flange 6 extends outwardly farther than the second flange 8, the first flange 6 acts to support the shelf whilst the second flange 8 acts to trap the shelf and prevent it pivoting in a clockwise manner about the first flange 6.

The first flange 6 is thicker than the second flange 8, and the back mounting plate 4 is thicker below the first flange 6 than above the first flange 6. This means that the first flange 6 is able to project as illustrated in an unsupported manner from the back support plate 4 but is still sufficiently robust in use to support the weight of a shelf and objects placed upon the shelf.

The shelf support 2 illustrated in Figures 1 and 2 can easily be extruded and it is economical in use of material. Because of the relative thinness of the second flange 8 and the portion of the back mounting plate 4 above the first flange 6, the second flange 8 and the portion of the back mounting

plate 4 above the first flange 6 can flex slightly if a slightl oversize shelf is pushed into the shelf-receiving slot 10. For example, in the case of wooden shelves, often the presence of a veneer on the upper and lower surfaces of the shelf will increase its thickness and, hitherto, difficulty could have been experienced and it may have been necessary to thin the shelf down, with subsequent damage to the shelf itself. This problem is obviated by the present invention because the shelf-receiving slot 10 can in effect expand slightly to the required size.

It will be seen most clearly from Figure 2 that the first flange 6 merges with the back mounting plate 4 over a curved portion 12 which causes the back mounting plate 4 to taper in thickness from below the first flange 6. It also causes the first flange 6 to taper in thickness from the back mounting plate 4 as illustrated.

Also as shown most clearly in Figure 2, the second flange 8 merges with the back mounting plate 4 in a straight sided joint which causes the back mounting plate 4 to be of substantially uniform thickness above the first flange 6.

The back mounting plate 4 is provided with a locating groove 14 which is positioned as illustrated midway between the first and the second flanges 6,8. The locating groove 14 is for locating a drill bit for drilling a mounting hole in a predetermined location in the back mounting plate 4. The locating groove 14 is V-shaped in cross section as shown.

The first flange 6 is provided with a retaining groove 16 positioned along its face that is nearest the second flange 8. The retaining groove 16 is provided with a strip of resilient material 18 as shown in Figure 5 and as will be described in detail hereinbelow. The retaining groove 16 is provided in a downwardly depending bead portion 20 extending along the edge of the first flange 6. It will be seen that the retaining groove 16 is deeper than the thickness of the adjacent portion 22 of the first flange 6. The retaining groove 22 has a mouth 24 which opens out into a cavity 26. The cavity 26 is larger than the mouth 24 so that the groove becomes a re-entrant type of groove.

Also as shown most clearly in Figure 2, the second flange 8 has a downwardly depending deformable bead 28. The bead 28 is deformable to enable a slightly oversize shelf (not shown) to be forced into the shelf-receiving slot 10. The bead 28 can then deform and this is better than having to cut away parts of the shelf to thin the shelf down. Such a thinned shelf often looks very poor from an aesthetic aspect.

Referring now to Figures 3 and 4, it will be seen that two further alternative designs of elongate shelf support 2 have been given. Similar parts as in Figures 1 and 2 have been given the same reference numerals and their precise construction and operation will not again be given.

In Figure 3, it will be seen that the retaining groove 16 has been omitted so that the face 30 of the first flange 6

that is nearest to the second flange 8 is flat and planar.

In Figure 4, the first flange 6 is like the first flange 6 shown in Figure 3. Also in Figure 4, the second flange 8 is provided with a portion 32 which is of increased thickness. The portion 32 is adjacent the back plate 14 as illustrated. Also in Figure 4, the locating groove 14 has been omitted.

In Figure 5, the shelf support 2 is like the shelf support shown in Figure 2 except that a recessed portion 33 is provided in the back mounting plate 4. Further, a thickened portion 32 like the one shown in Figure 4 is employed.

In Figure 6 the shelf support 2 is like the shelf support shown in Figure 5. In Figure 6, the locating groove 14 has been omitted. Also, the bead part 20 is provided with a hook member 35. A similar hook member 37 is provided at the bottom of the back mounting plate 4. The two hook members 35, 37 enable an insert to be provided. The insert may be a gusset-type insert as described later with reference to Figure 21. The insert will be held in position by the hook members 35, 37 and the insert may snap in position or it may slide in position. The insert may constitute a cover for electrical wiring or the like.

Figure 7 illustrates the shelf support 2 of Figures 1 and 2 in position against a wall 34. A screw 36 is shown having passed through a hole drilled in the locating groove 4. The screw 36 passes through the wall 34 into a wooden upright 38. Figure 7 shows also a shelf 40 in position in the shelf-receiving slot 10. The shelf 40 has slightly

deformed the bead 28. The shelf 40 rests on and has also slightly deformed the strip of resilient material 18 which is positioned in the retaining groove 16 in the bead portion 20. In addition to being able to deform to allow different thicknesses of shelf 40, the strip of resilient material 18 acts as a gripping member to help ensure that the shelf 14 does not slide out from the shelf-receiving slot 10. Still further, especially with glass shelves 40, the strip of material 18 acts as a cushion to help prevent the glass from chipping, especially where the shelf 40 is a tight fit. The strip of resilient material is preferably polyvinyl chloride and it can be slotted into the retaining groove 16 from either end.

Referring now to Figure 8, similar parts as in Figures 1 and 2 have been given the same reference numerals. In Figure 8, the second flange 8 is provided on its bottom surface with a second deformable bead 42.

Also in Figure 8, the second flange is provided as shown with upstanding first and second spaced apart walls 44,46 respectively. The walls 44,46 define a guide channel 48. The first and second walls 44,46 are formed integrally with the remainder of the elongate shelf support 2, and the guide channel 48 is for receiving and guiding a sliding member as will be described hereinbelow. As shown in Figure 8, the first wall 44 is formed as an extension of the back support member 14. The first wall 44 is thinner than that portion of the back support member 14 between the first and

the second flanges 6,8. The first and the second walls 44,46 have inwardly directed lips 50,52.

Referring now to Figure 9, it will be seen that the elongate shelf support 2 is similar to that illustrated in Figure 8. In Figure 9, the lips 50,52 are each provided with a groove 54,56 respectively. The grooves 54,56 can be used to assist in locking the sliding member in the guide channel 48.

In Figures 1 to 4, it will be seen that the back support member 12 has a flat mounting face 58. In Figure 10, an elongate support member 2 is shown which is like the support member 2 shown in Figure 8 but the back mounting plate 4 has a stepped face 60. The portion 62 of the stepped face 60 is for engaging the wall or other mounting surface. The portion 64 forms a recessed portion like the recessed portion 33 shown in Figure 6. The recessed portions 33,64 are for accepting the head of a wall plug device to provide a positive screw fix for brick and concrete walls and the like. Thus, the recessed portions 33,64 do not engage the wall or other mounting surface. It will be noticed however that the second flange 8 has a protrusion 66 which finishes level with the surface of the portion 62 and so will engage the wall or other mounting surface.

In Figure 10, a thickened portion 32 is provided on the first flange 8 and this thickened portion 32 can be provided with the deformable bead 42. Also, in Figure 10, it will be noticed that the lips 50,52 are shaped slightly differently than the lips 50,52 in Figures 8 and 9.

Figure 10 further shows that the second wall 46 of Figure 9 has been replaced by a curved wall portion 68 which is shaped as shown. The curved wall portion 68 may be employed for aesthetic effect.

Figure 10 further illustrates that the locating groove 14 can be omitted from the back mounting plate 4 if desired.

In Figure 11, the first wall 44 is stepped back from the back mounting plate 4.

In Figure 12, there is shown an alternative basic design to that shown in Figures 8 to 11 but which still gives the guide channel 48. In Figure 12, it will be seen that the second flange 8 is provided with a single upstanding wall 70. The wall 70 has a downwardly depending lip 72 at its upper end and this lip 72 faces a similar lip 74 which upstands from the second flange 8 in spaced apart relation to the wall 70 as illustrated. The pair of lips 72, 74 and the wall 70 form the guide channel 48 and it will be seen that the mouth of the guide channel 48 opens in the same direction as the shelf-receiving slot 10. The guide channel 48 is however positioned above the second flange 8. and it is for receiving at least one sliding member similarly as with the guide channel 48 illustrated in Figures 8 to 11.

In a further alternative design illustrated in Figure 13, the guide channel 48 is provided below the first flange 6. More specifically, a pair of spaced apart lips 76, 78

project outwardly from the back mounting plate 4 below the first flange 6 as illustrated. The pair of lips 76,78 and the back mounting plate 4 define the guide channel 48. As illustrated, the guide channel 48 has a mouth which opens in the same direction as the shelf-receiving slot. Actually, because the lips 76,78 are mounted on the inclined surface 80 of the back support plate 4, the guide channel 48 extends downwardly at a slight angle but it will be appreciated that the mouth of the guide channel 48 extends in the same general direction as the shelf-receiving slot 10.

Figure 14 illustrates another design in which the guide channel 48 can be positioned beneath the first flange 6. In Figure 14, a pair of spaced apart lips 82, 84 are provided and these lips 82,84 project downwardly from the first flange 6. The pair of lips 82,84 and the first flange 6 define the guide channel 48. It will thus be seen that the guide channel 48 has a mouth which opens substantially at right angles to the direction at which the shelf-receiving slot opens. The guide channel 48 extends at a slight angle to the vertical because it is provided on the tapering surface 86 on the underside of the first flange 6.

Any of the illustrated rectangular guide channels 48 may be replaced by the part circular guide channel illustrated in Figure 15. In Figure 15, the guide channel 48 is defined by the curved lips 88,90. Figure 15 also illustrates part 92 of a sliding member in the form of a book end 94. The

part 92 is part circular as shown but it also has a grooved portion 96 which enables the part 92 to be fitted into the guide channel 48 and then slightly rotated to remain within the guide channel 48 but still capable of being slid along the guide channel 48. Alternatively, the book end 94 could just be removed from the guide channel 48 and re-inserted into the guide channel 48 at any desired position along the length of the guide channel 48. The part 92 is shown in Figure 15 as having welded to it an arm 98.

Figure 16 shows an elongate shelf support 2 which is substantially the same as the shelf support 2 illustrated in Figure 8, the shelf support 2 being mounted on a wall 34 by means of screws 36. A book end 94 is shown mounted in the guide channel 48. The arm 98 extends into a rectangular shaped book end holding portion 100. The other end of the arm 98 is provided with an angled bracket 102 which clips into the guide channel 48. The extreme left hand end of the bracket 102 is upturned slightly to engage with the lip 50.

An abutment member 104 is provided where the bracket 102 joins the extreme left hand end of the arm 94 and this abutment member can co-operate with the lip 52 to prevent unwanted movement of the bracket 102 in the guide channel 48. The book end 94 can be slid along the guide channel 48 if desired. When it is desired to move the book end 94, it is pushed upwardly at an anti-clockwise direction and taken out.

It will thus be appreciated that the book end 94 clips into and clips out of the guide channel 48 at any desired position along the guide channel 48 and via the mouth of the guide channel 48. Thus a sliding book end 94 is provided.

In Figure 17, an elongate shelf support 2 of the type shown in Figure 9 is shown as being also provided with a book end 94. The book end 94 has a slightly different design of bracket 102 to that shown in Figure 16. The differences in bracket design can readily be seen, the bracket 102 shown in Figure 17 having a pair of legs 106, 108 which have inclined surfaces for running against the inclined surfaces of the lips 50, 52. The holding portion 100 shown in Figure 17 is hexagonal as illustrated instead of rectangular as shown in Figure 16.

Figure 18 shows another shape for a book end 94. Similar parts as in Figures 16 and 17 have been given the same reference numerals. The angled bracket will clip into and slide in its associated guide channel 48.

Figure 19 shows a different way of fixing the shelf support 2 shown in Figures 1 and 2 to a vertical surface in the form of a slatted wall formed of slats 110. The shelf support 2 shown in Figure 19 has the locating groove 42 omitted. Instead, the rear surface of the back mounting plate 4 is provided with a plurality of mounting means in the form of hook devices. One hook device is shown as hook device 112. It will be seen from Figure 19 that the hook device 112 extends from the face of the back mounting

plate 4 so that it is opposite the face from which the first and the second flanges 6,8 extend. The hook device 112 passes through the mouth 114 of a cavity 116 formed between the illustrated two slats 110. The hook device 112 locates behind the downwardly depending lip 118 of the upper slat 110 and so the shelf support 2 is located in position. The shelf support 2 can however slide horizontally along the slats 110 as will be appreciated.

Figure 20 illustrates a somewhat similar shelf support to that illustrated in Figure 2, the main difference being that a slightly different type of mounting means is provided on the back mounting plate 4. The mounting means is in the form of a hook device 120 which has an upper hook portion 122 for positioning in a cavity such as the cavity 116 shown in Figure 19.

Figure 21 illustrates an insert 124 for locating behind the hook members 35,37 shown in Figure 6. The insert 124 has beads 126, 128 at each end for locating behind the hook members 35,37 as will readily be understood. The insert 124 can thus cover electrical wiring or similar equipment running along the shelf support 2.

It is to be appreciated that the embodiments of the invention described above have been given by way of example only and that modifications may be effected. Thus, for example, the elongate shelf support 2 may be provided with a strengthening gusset in the form of an angled strut (not shown). One or more of these angled struts may be employed.

Book end shapes other than those illustrated may be used. The hook device 120 shown in Figure 20 could be replaced by a nut and bolt with the bolt passing through a hole in the back mounting plate 4. The bolt head would then be positioned in the slot 10 and the nut would be spaced apart from the rear surface of the back mounting plate 4. If desired, the surface 30 of the first flange 6 shown in Figures 3 and 4 may be provided towards the face of the first flange 6 with a stick on strip of resilient material or with a plurality of stick on pads of resilient material. Such a strip or pads of resilient material can also be used in the other illustrated shelf supports by omitting the illustrated retaining groove 16. The relative length of the first and the second flanges 6,8 can be varied as desired so that whilst the first flange 6 will usually be more than twice the width of the second flange 8, the second flange 6 can be less than twice the width of the second flange 8 if desired. The recessed portions 33,64 may be provided on all the other illustrated shelf supports where they are not already present.

In Figures 8 to 11, the lips 50,52 could be cropped away at one or more places along the length of the second flange 8 so that a book end or other sliding member could be dropped in along the length of the guide channel 48 and then slid to a desired position, instead of initially being introduced into the guide channel 48 from either end. A

similar arrangement can be effected for the guide channels 48 shown in Figures 12,13 and 14.

The present invention also extends to the sliding member on its own and, preferably, the sliding member is a book end.

CLAIMS

1. An elongate shelf support comprising a back mounting plate and first and second flanges, the shelf support being formed as an extrusion so that the back mounting plate and the first and the second flanges are integrally formed together, the back mounting plate being for mounting the shelf on a vertical surface, and the first and the second flanges being such that they are spaced apart and extend outwardly from the back mounting plate substantially at right angles to the back mounting plate to define a shelf-receiving slot for receiving a shelf which is a friction fit in the shelf-receiving slot, the first flange extending outwardly farther than the second flange so that the first flange acts to support the shelf whilst the second flange acts to trap the shelf and prevent it pivoting in a clockwise manner about the first flange, the first flange being thicker than the second flange and the back mounting plate being thicker below the first flange than above the first flange whereby the first flange projects in an unsupported manner from the back support plate but is still sufficiently robust in use to support the weight of a shelf and objects placed upon the shelf.

2. An elongate shelf support according to claim 1 in which the first flange merges with the back mounting plate over a curved portion which causes the back mounting plate to taper

in thickness from below the first flange and the first flange to taper in thickness from the back mounting plate.

3. An elongate shelf support according to claim 1 or claim 2 in which the back mounting plate has a locating groove positioned between the first and the second flanges, the locating groove being for locating a drill bit for drilling a mounting hole in a predetermined location in the back mounting plate.

4. An elongate shelf support according to any one of the preceding claims in which the first flange has a retaining groove positioned along its face that is nearest the second flange, the retaining groove being provided with a strip of resilient material, and the resilient material acting as a deformable retaining member whereby the resilient material can deform for causing the shelf to be a tight friction fit in the shelf-receiving slot and whereby the resilient material can grip the shelf when the shelf is inserted into the shelf-receiving slot.

5. An elongate shelf support according to claim 4 in which the retaining groove is provided in a downwardly depending bead portion extending along the edge of the first flange whereby the retaining groove is deeper than the thickness of the adjacent portion of the first flange.

6. An elongate shelf support according to any one of the preceding claims in which the second flange has a downwardly depending deformable bead, the bead being deformable to enable a slightly oversize shelf to be forced into the shelf-receiving slot.

7. An elongate shelf support according to any one of the preceding claims in which the back mounting plate has a stepped mounting face, a part of the back mounting plate above the first flange being stepped back towards the first flange.

8. An elongate shelf support according to any one of the preceding claims in which the second flange is provided with first and second upstanding spaced apart walls which define a guide channel, the first and the second walls being formed integrally with the remainder of the elongate shelf support, and the guide channel being for receiving and guiding at least one sliding member.

9. An elongate shelf support according to claim 8 in which the first wall is formed as an extension of the back mounting plate.

10. An elongate shelf support according to claim 8 or claim 9 which includes the sliding member, and in which the sliding member is a book end.

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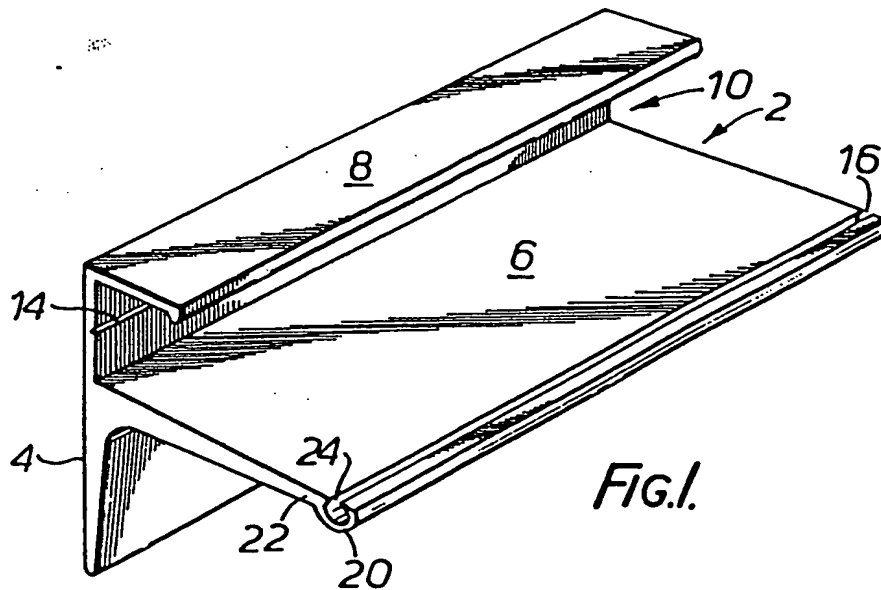


FIG. 1.

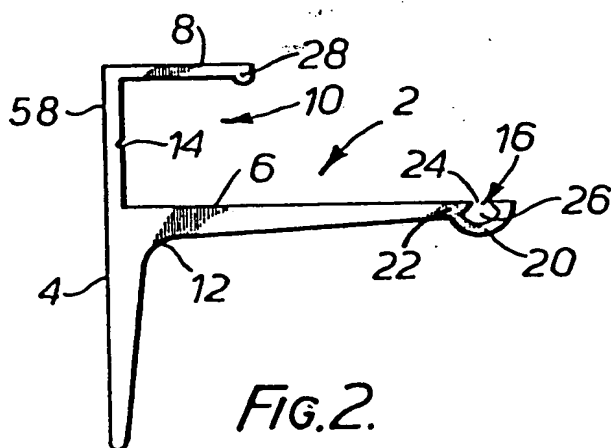


FIG. 2.

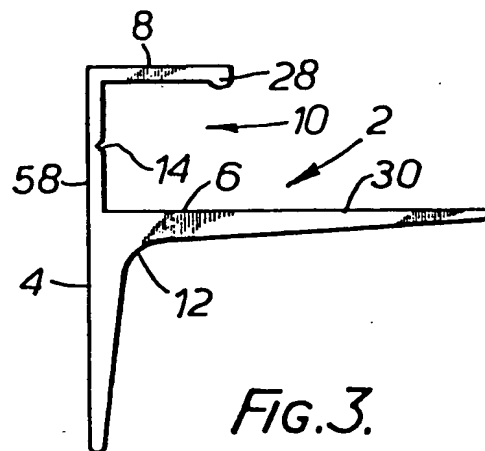


FIG. 3.

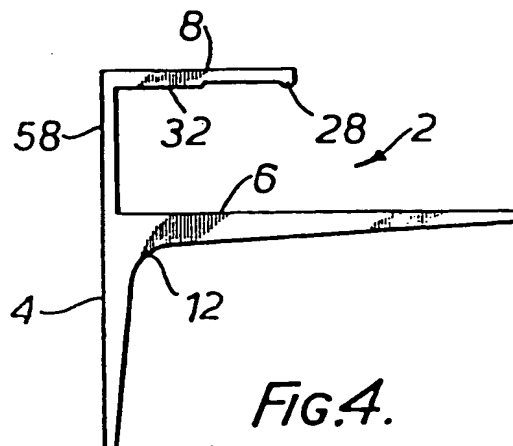


FIG. 4.

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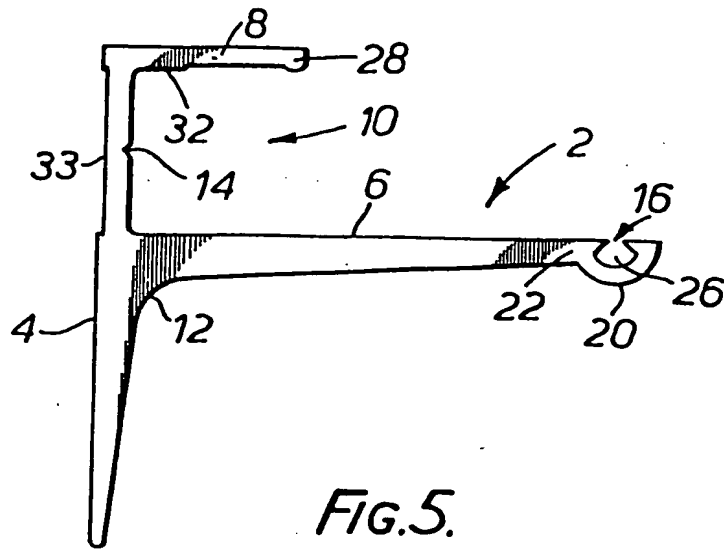


FIG. 5.

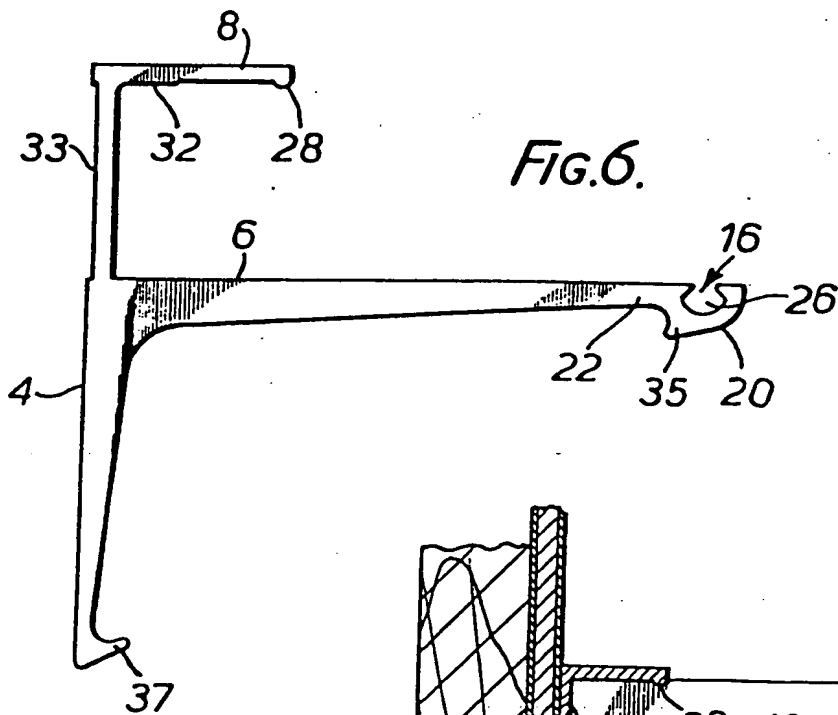


FIG. 6.

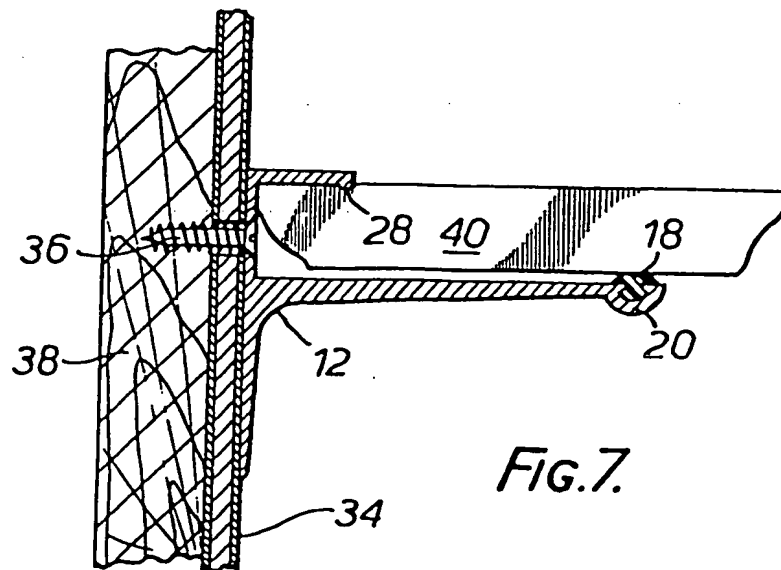


FIG. 7.

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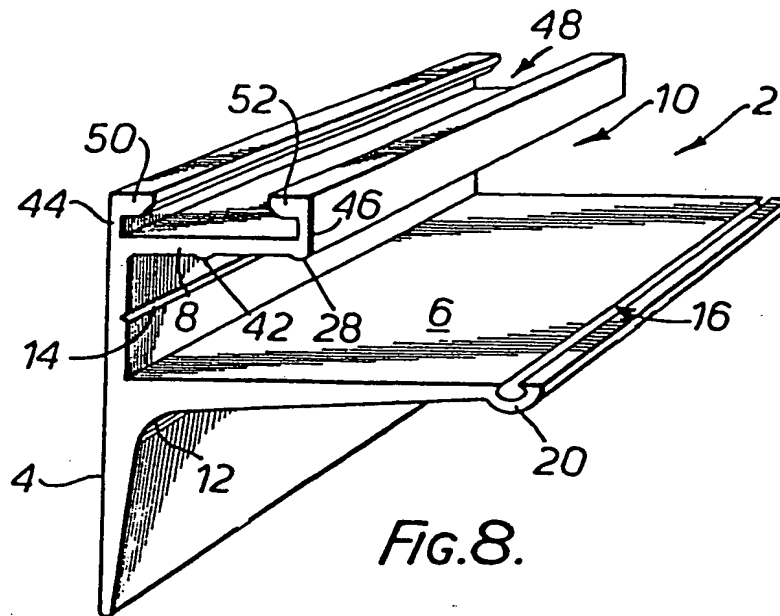


FIG. 8.

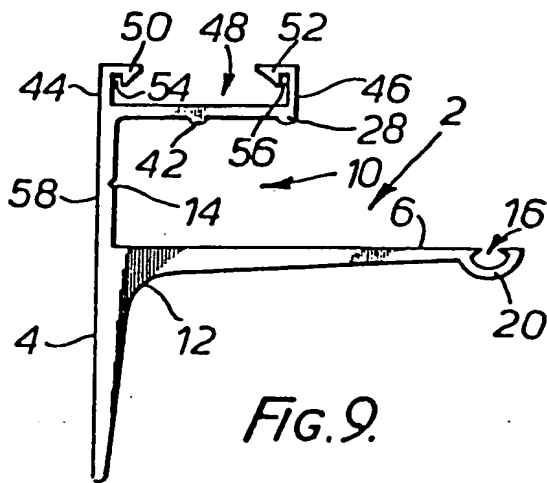


FIG. 9.

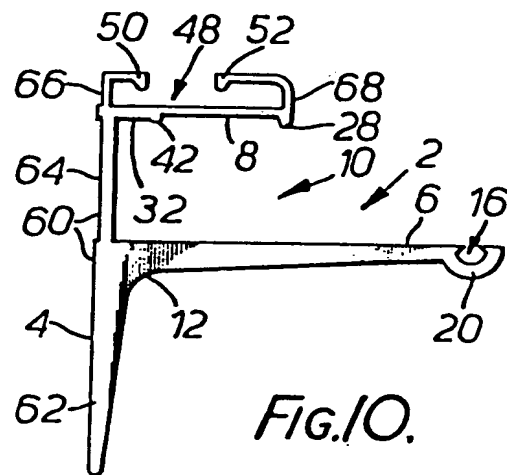


FIG. 10.

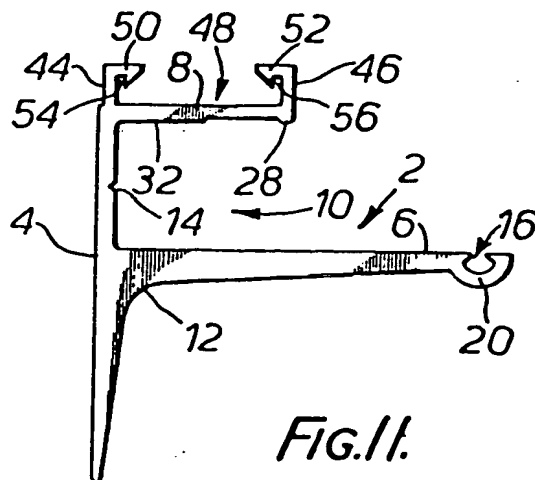


FIG. 11.

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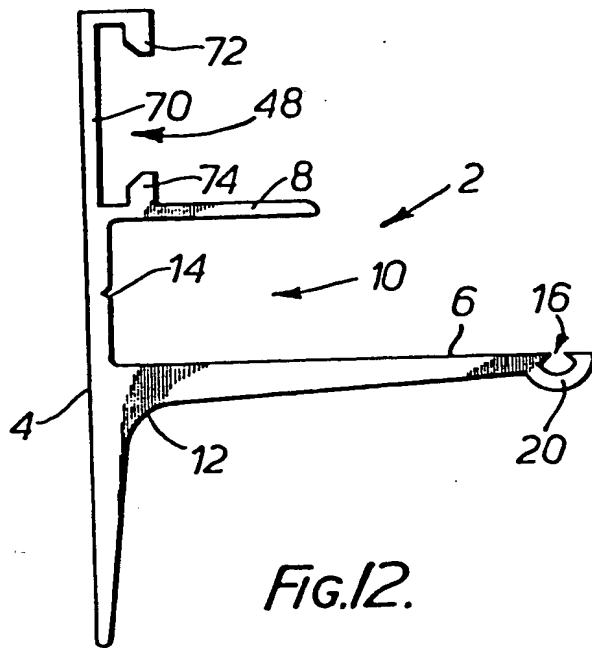


FIG. 12.

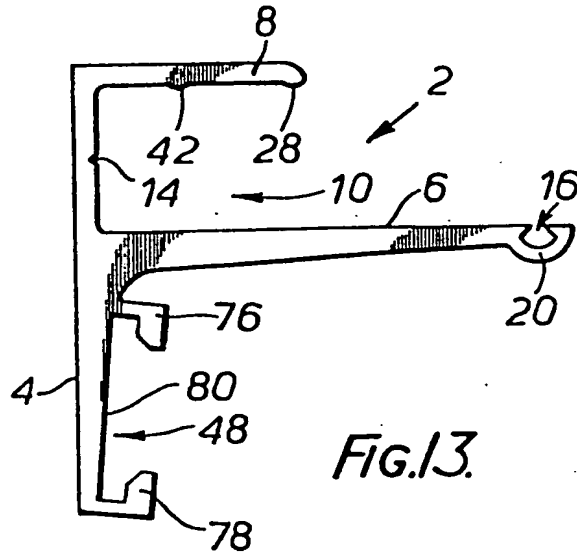


FIG. 13.

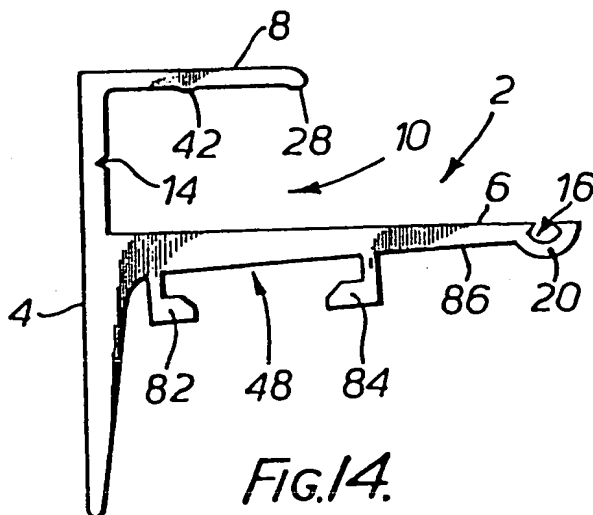


FIG. 14.

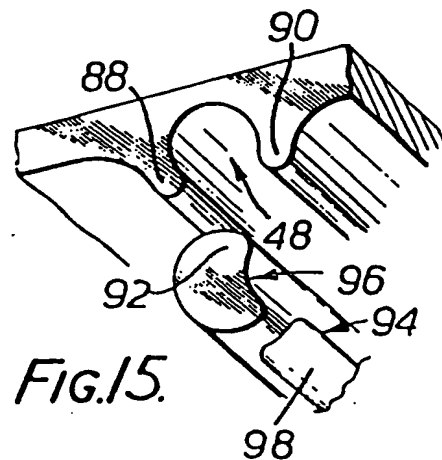


FIG. 15.

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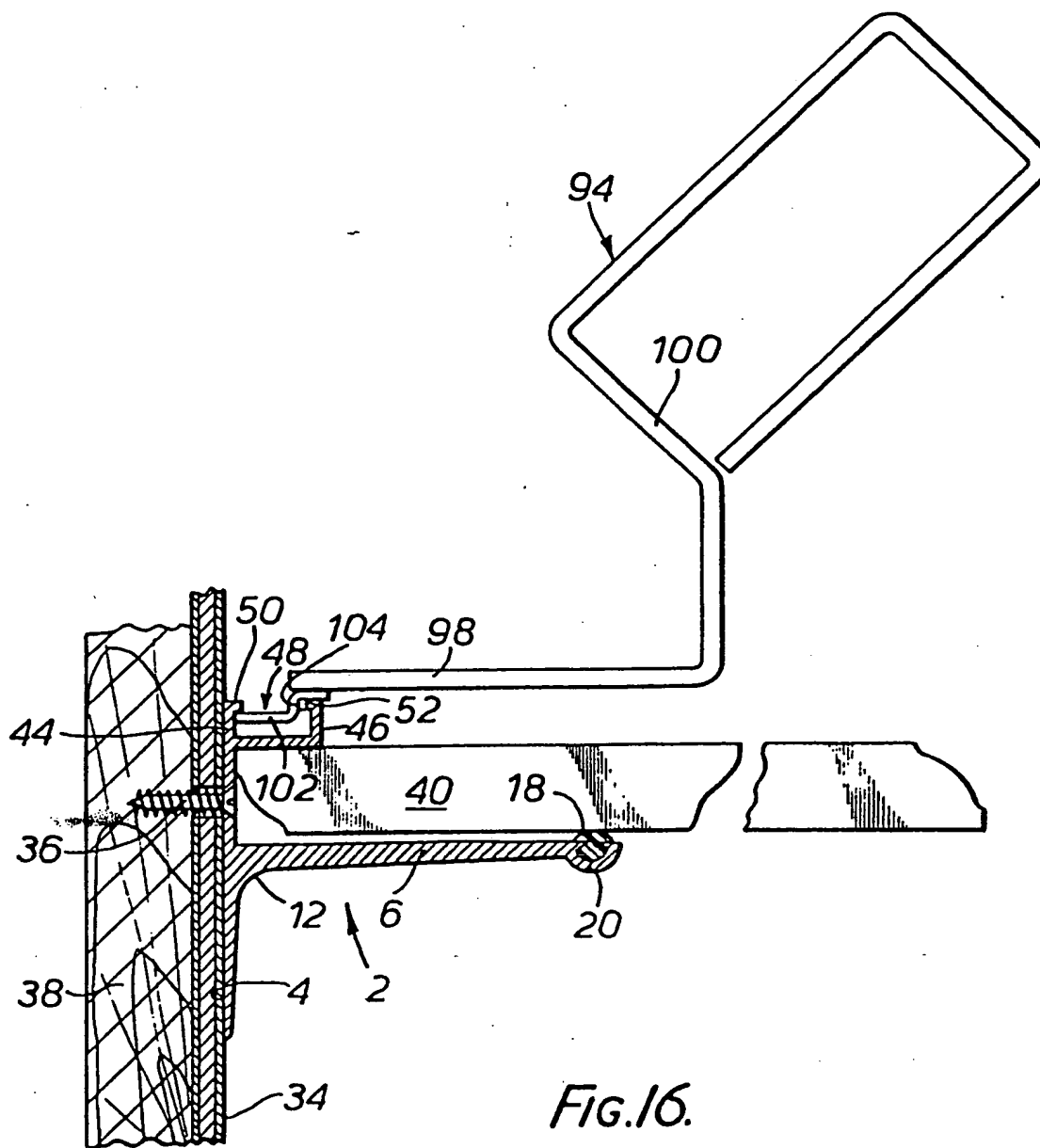
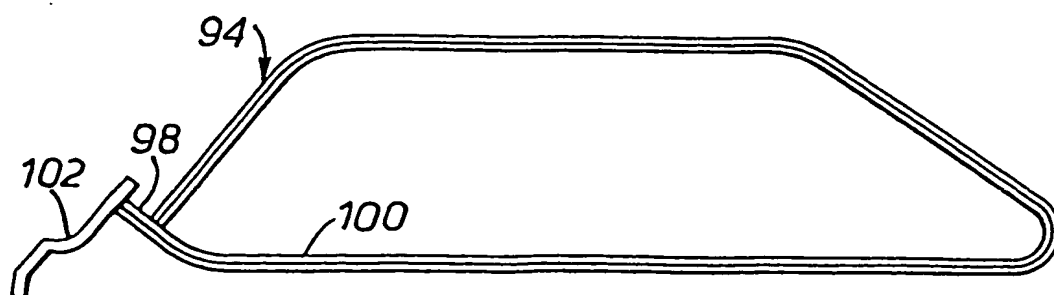
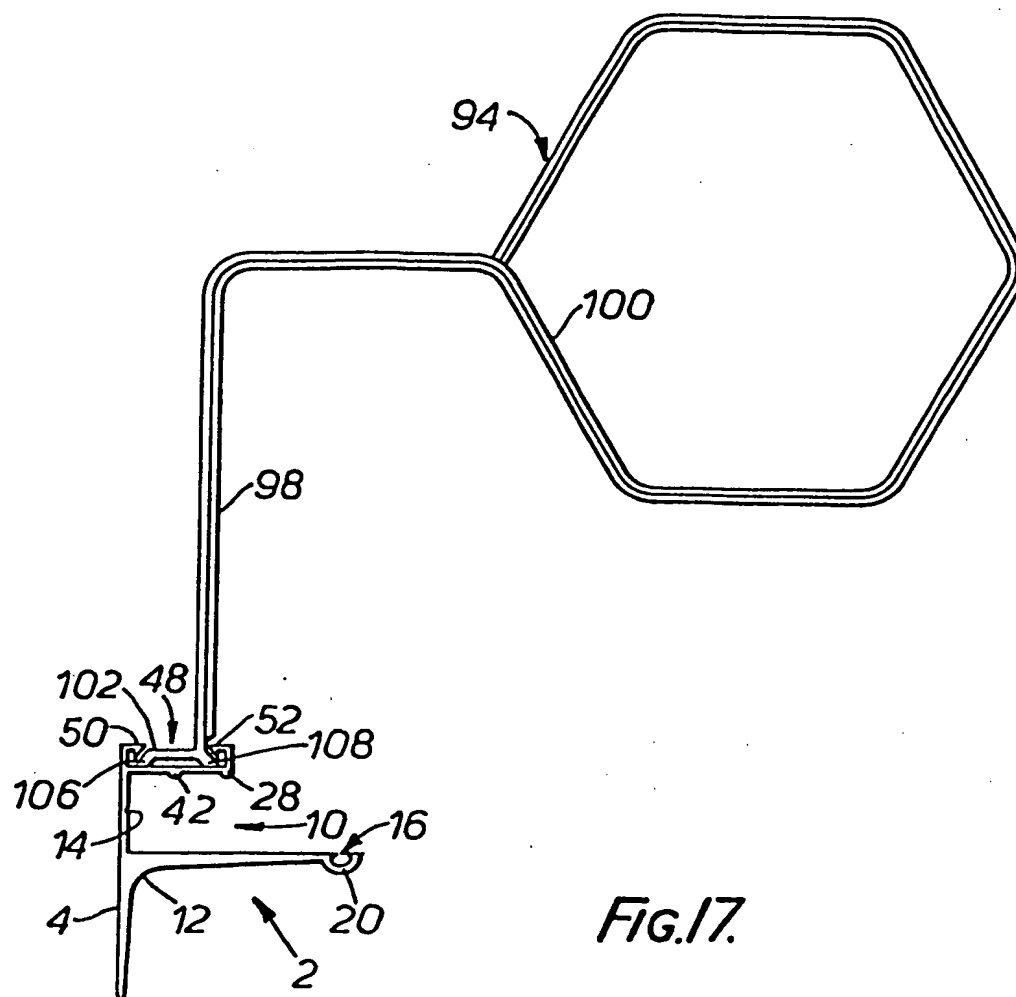


Fig. 16.

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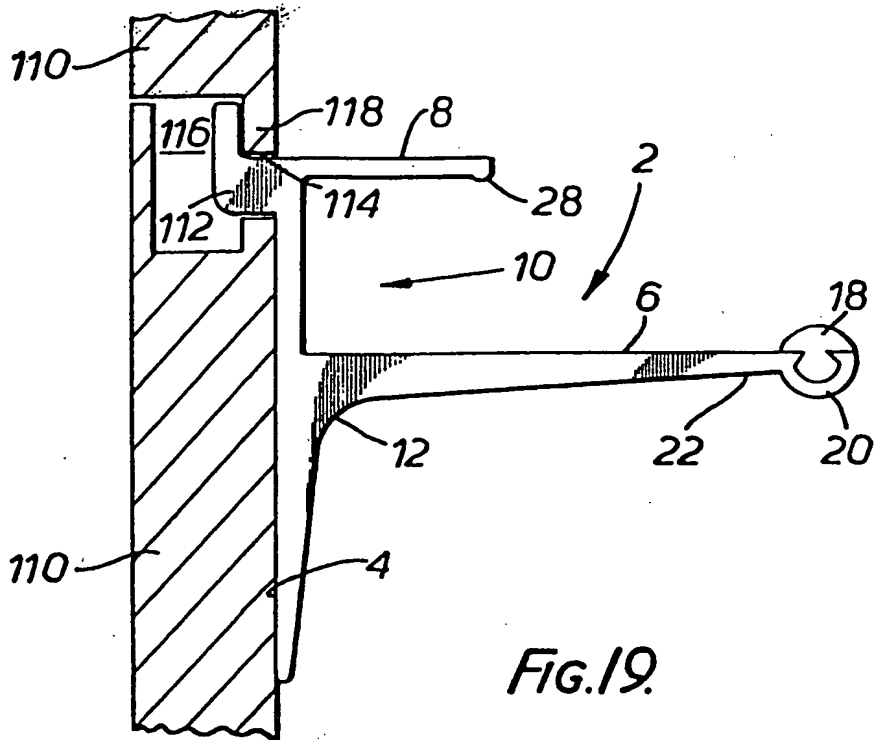


FIG. 19.

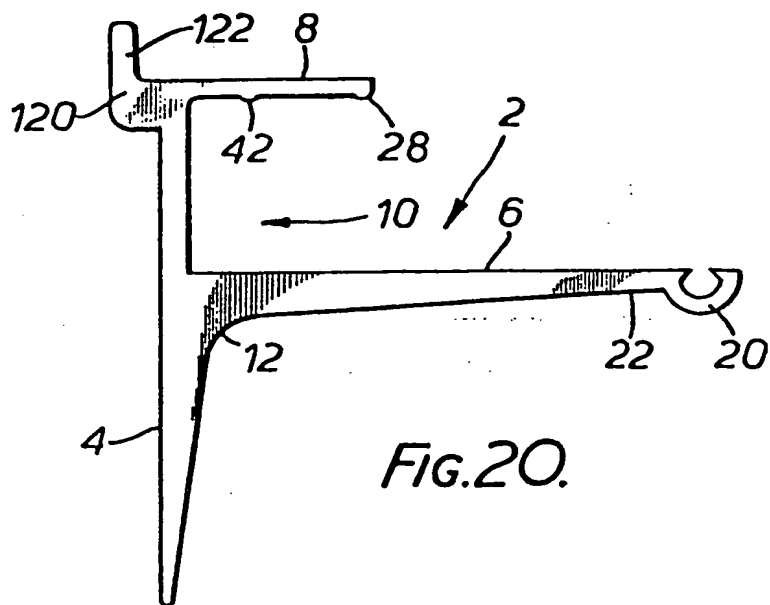


FIG. 20.



FIG. 21.

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